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 TI Model dendrons and dendrimers incorporating diphenylamino-substituted diphenylpolyene and PPV-oligomer moieties for NLO applications
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 SO Proceedings of SPIE-The International Society for Optical Engineering (1999), 3736 (Organic Nonlinear Optical Materials), 170-177
 CODEN: PSISDG; ISSN: 0277-786X
 PH SPIE-The International Society for Optical Engineering
 DT Journal
 LA English
 CC 35-8 (Chemistry of Synthetic High Polymers)
 Section cross-reference(s): 36, 73
 AB The synthesis and characterization are described of diphenylamino-substituted diphenylpolyene and poly(p-phenylenevinylene)s as two-photon absorbers, photoluminescent materials suitable for org. light-emitting diodes, and as dendrimers capable of 3D charge delocalization and exceptionally large third order hyperpolarizability. Bis-(diphenylamino)diphenylpolyenes form exceptionally stable, highly absorbing bipolaronic dications in soln. and thin film. Replacement of one diphenylamino substituent with a N-(hydroxyethyl), N-ethylaminophenyl moiety yields a polyene that also forms stable bipolarons which are intensely fluorescent. These chromophores are easily attached to either a PMMA backbone or to 3,5-dihydroxybenzyl alc. to yield functionalized dendrons capable of attachment to various core mols. Diphenylamino-substituted PPV oligomers can also be obtained with similar functionality. These materials possess large two-photon cross-sections and display optical limiting for nanosecond pulses with peak activity extending into the visible portion of the spectrum.
 ST dendron diphenylamino diphenylpolyene prepn nonlinear optical property; polyphenylenevinylene diphenylamino substituent photon absorber; optical limiting dendrimer diphenylamino diphenylpolyene
 IT Poly(arylenealkenylenes)
 RL: PNU (Preparation, unclassified); PRP (Properties); PREP (Preparation) (dendritic; prepn. of model dendrons and dendrimers incorporating diphenylamino-diphenylpolyene and PPV-oligomer and luminescence and hyperpolarizability of compds. for NLO applications)
 IT Chemical chains
 (hyperbranched; prepn. of model dendrons and dendrimers incorporating diphenylamino-diphenylpolyene and PPV-oligomer and luminescence and hyperpolarizability of compds. for NLO applications)
 IT Bipolaron
 Fluorescence
 Luminescence, electroluminescence
 Nonlinear optical materials
 Optical hyperpolarizability
 Optical limiting
 (prepn. of model dendrons and dendrimers incorporating diphenylamino-diphenylpolyene and PPV-oligomer and luminescence and hyperpolarizability of compds. for NLO applications)
 IT Dendritic polymers
 RL: PNU (Preparation, unclassified); PRP (Properties); PREP (Preparation) (prepn. of model dendrons and dendrimers incorporating diphenylamino-diphenylpolyene and PPV-oligomer and luminescence and hyperpolarizability of compds. for NLO applications)
 IT 281635-29-6P
 RL: PNU (Preparation, unclassified); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)

(convergent dendron; prepn. of model dendrons and dendrimers incorporating diphenylamino-diphenylpolyene and PPV-oligomer and luminescence and hyperpolarizability of compds. for NLO applications)

IT 281655-31-0P

RL: PNU (Preparation, unclassified); PRP (Properties); PREP (Preparation) (dendrimer; prepn. of model dendrons and dendrimers incorporating diphenylamino-diphenylpolyene and PPV-oligomer and luminescence and hyperpolarizability of compds. for NLO applications)

IT 134061-63-5P

RL: PNU (Preparation, unclassified); PRP (Properties); PREP (Preparation) (prepn. of model dendrons and dendrimers incorporating diphenylamino-diphenylpolyene and PPV-oligomer and luminescence and hyperpolarizability of compds. for NLO applications)

IT 281655-28-5P, 4-Diphenylamino-4'-(N-ethyl-N-(2-hydroxyethyl)stilbene

RL: PNU (Preparation, unclassified); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)

(prepn. of model dendrons and dendrimers incorporating diphenylamino-diphenylpolyene and PPV-oligomer and luminescence and hyperpolarizability of compds. for NLO applications)

IT 55035-42-2, 4-(Diphenylamino)-4'-[4-(diphenylamino)styryl]stilbene

RL: PRP (Properties)

(prepn. of model dendrons and dendrimers incorporating diphenylamino-diphenylpolyene and PPV-oligomer and luminescence and hyperpolarizability of compds. for NLO applications)

IT 80-05-7, reactions 29654-55-5, 3,5-Dihydroxybenzyl alcohol

RL: RCT (Reactant); RACT (Reactant or reagent)

(prepn. of model dendrons and dendrimers incorporating diphenylamino-diphenylpolyene and PPV-oligomer and luminescence and hyperpolarizability of compds. for NLO applications)

RE.CNT 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD

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